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1
h NESP55
b NESP55
Consensus

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
I	R	L	E	V	K	R	M	D											
-	-	-	-	-	-	-	-	-	M	E									
x	x	x	x	x	x	x	x	x	M										

30
h NESP55
b NESP55
Consensus

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A	R	H	N	N	N	T	L	C											
A	R	H	N	N	N	D	L	C											
A	R	H	N	N	N	N	L	C											

20
h NESP55
b NESP55
Consensus

11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
R	R	R	A	Q	Q	T	R	R											
R	R	R	S	R	Q	L	G	R	R										
R	R	R	R	x	Q	x	x	R	R										

10
h NESP55
b NESP55
Consensus

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
I	R	L	E	V	K	R	M	D											
-	-	-	-	-	-	-	-	-	M	E									
x	x	x	x	x	x	x	x	x	M										

80
h NESP55
b NESP55
Consensus

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
S	L	N	A	H	H	R	S	G											
T	L	N	A	H	H	R	S	A											
L	N	A	H	H	R	S	x												

70
h NESP55
b NESP55
Consensus

31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Q	Q	R	A	A	A	Q	O	R	R										
Q	Q	R	A	A	A	Q	-	R	R										
Q	Q	R	A	A	A	Q	x	R	R										

60
h NESP55
b NESP55
Consensus

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
R	A	L	A	T	S	N	A	R	A										
R	A	L	A	T	S	T	R	A											
R	A	L	A	T	S	x	x	R	A										

50
h NESP55
b NESP55
Consensus

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
L	L	S	C	S	I	A	L	L											
L	L	S	C	S	I	A	L	L											
L	L	S	C	S	I	A	L	L											

120
h NESP55
b NESP55
Consensus

81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
V	-	F	E	E	D	M	E	T											
O	E	E	D	M	E	S													
x	x	x	x	x	x	x													

110
h NESP55
b NESP55
Consensus

61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
L	E	L	S	L	E	C	L	E											
E	S	L	E	C	L	E													
x	x	x	S	L	C	x													

100
h NESP55
b NESP55
Consensus

71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
E	S	D	H	E	H	E	A	D											
-	-	-	-	-	-	-	-	-											
x	x	x	x	x	H	E	A	D											

90
h NESP55
b NESP55
Consensus

81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
A	Q	V	E	S	E	S													
A	Q	V	E	S	E	S													
A	Q	V	E	S	E	S													

160
h NESP55
b NESP55
Consensus

121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
E	D	D	R	G	V	V	K												
E	D	D	R	G	V	V	K												
E	D	D	R	G	V	V	K												

150
h NESP55
b NESP55
Consensus

141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
A	T	T	E	E	E	E													
A	T	T	E	E	E	E													
A	T	T	E	E	E	E													

140
h NESP55
b NESP55
Consensus

131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
E	T	D	E	E	E	E	E	T											
E	T	D	E	E	E	E	E	T											
E	T	D	E	E	E	E	E	T											

130
h NESP55
b NESP55
Consensus

121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
E	S	E	T	E	S	I	E	S											
E	S	E	T	E	S	I	E	S											
E	S	E	T	E	S	I	E	S											

Fig. 1 (Part 1 of 2)

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h NESP55	170	180	190	200
	H S T G Q B L R Q	R L H A L K L R S	P A S S R A S	T Q S R G
b NESP55	R T T H Q S L T E	R L S A L R L R S	P A S S R A S	T Q S R Q G
Consensus	x x T T x Q S L T z	R L x A L x L R S	P A S S R A S	T Q T x z S R z G

h NESP55	210	220	230	240
	E L K E D K D	R D E S K E K	E E - K Q R R R C	K K K R R R A
b NESP55	E - - E D K D	R D E S E E K	E E E K Q Q H R C	K K K T R R D
Consensus	E x x x E D K D	R D E S x E K	E E x x x Q x x R C	K K K T R R D x

h NESP55	250	260	270	280
	E E K K G	I I R R H		
b NESP55	S E S K R G A	I I R R H		
Consensus	S E S K x G x	I I R R H		

Fig. 1 (Part 2 of 2)

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GAATTCGGCTCGAGGTGCCCTAAGAGGATGGATCGGAGGTCCCGGGCTCAGCAGTGGCGCCGAGCTGCGCCATAATTACAAC
GACCTGTGCCCCCATAGGCCGCGCGGAGCCACCGCGCTCCTCTGGCTCTCCTGCTCCATCGCGCTCCTCCGGGCCCT
TGCCACCTCCAACGCCCGTGCCAGCAGCGCGGTGCCCAACAGCGCCGGAGCTTCTTAACGCCACACCGCTCCG
GGCCCCAGGTATTCCCTGAGTCCCCCGAATCGGAATCTGACCACGAGCAGGAGGAGGAGACCTTGAGCTGTCCCTCCCC
GAGTGCCTAGAGTACGAGGAAGATTGCACTACGAGACCGAGAGCGGAGTCCGAAATCGAGTCCGAGACCGACTT
CGAGACCGAGCCTGAGACCGCCCCACCACTGAGCCGAGACCGAGCTGAAGACGATCGCGGCCCGGTGGTGCCCAAGC
ACTCACCTTCGGCCAGTCCCTCACCCAGCGTCTGCACGCTCTCAAGTTGCCAAGCCCCGACGCTCCCAAGTCGCGCG
CCGCCAGCACTCAGGAGCCCCAGAGCCCCAGGAGGAGGAGCTCAAGCCCCGAGGACAAAGATCCAAGGGACCCCCGA
AGAGTCGAAGGAGCCCAAGAGGAGAGCAGCGCGCTCGCTCAAGCCCAAGAGCCACCGCGGTACGCGTCCCGCGG
AGTCCCCCTTCCAAAAGGGACCCATCCCCATCCGGCTCACTAATGGAGGACGCGCTCCAGATTCTCCTTGTTCATGG
ATTCAGGTGCTGGAGATCTGGTAAAGCACCATTTGTGAAGCAGATGAGGATCCTGCATGTTAATGGGTTTAATGGAGAG
GGCGCGAAGAGGACCGCAGGTGCAAGGAGCAACAGCGATGGTGAGAAAGCAACCAAGTGCAAGGACATCAAAAACAA
CCTGAAGAGGCGATTGAACCATTTGTGGCCCGCATGAGCAACCTGGTGCCCCCGTGGAGCTGGCCAAACCCGAGAAC
AGTTCAGAGTGGACTACATTCTGAGTGTGATGAACGTGCTGACTTTGACTTCCCTCCCGAATTCATGAGCATGCCAAG
GCTCTGTGGGAGGATGAAGGAGTGGTGCTGTACGAACGCTCCACGAGTACCAAGTGAATTGACTGTGCCAGTACTT
CCTGGACAAGATCGACGTGATCAAGCAGGCTGACTATGTCCGAGCGATCAGGACCTGCTTCGCTGCCGTGTCCTGACTT
CTGGAATCTTTGAGACCAAGTCCAGGTGGACAAAGTCAACTTCCACATGTTTGACGTGGTGCCAGCGCATGAACGC
CGCAAGTGGATCCAGTGCTTCAACGATGTGACTGCCATCATCTTCGTGGTGCCAGCAGCAGCTACAACATGGTCAATCCG
GGAGGACAACCAAGACCGCCTGCAGGAGGCTCTGAACCTCTTCAAGAGCATCTGGAACAACAGATGGCTGCGCACCA
TCTCTGTGATCCTGTCTCAACAAGCAAGATCTGCTCGCTGAGAAAGTCTTGTCTGGGAAATCGAAGATTGAGGACTAC
TTTCCAGAAATTGCTCGCTACACTACTCCTGAGGATGCTACTCCGAGCCCGGAGAGGACCCACGCGTGACCCGGGCCAA
GTACTTCATTGAGATGAGTTTCTGAGGATCAGCACTGCCAGTGGAGATGGCGCTCACTACTGCTACCTCATTTTCACTT
GGCTGTGGACACTGAGAACATCCGCCGTGTGTTCAACGACTGCCGTGACATCATTCAGCGCATGCACCTTCGTCAGTAC
GAGCTGCTCTAAGAAAGGGAACCCCAATTTAATTAAAGCCTTAAGCACAATTAATAAAGTGAACGTAATTGTACAA
GCAGTTAATCACCCACCATAGGGCATGATTACAAGCAACCTTTCCCTTCCCGAGTGATTTTGGGAAACCCCTTTT
CCCTTCAGCTTGCTTAGATGTTCCAAATTTAGAAAGCTTAAGCGGCCCTACAGAAAAGGAAAAGGCCACAAAAGTTC
CCTCTCACTTTTCAGTAAAAATAAATACAGCAGCAGCAACAAATAAAATGAAATGAAAGAAACAAATGAAATAAATA
TTGTGTTGTGCAGCATTAATAAAAAATCAAAATAAAAAATTAATGTGAGCAAAAAAAGGGCGGCGCGC

Fig. 3